

ABSTRACT OF SANITARY REPORTS.

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UNITED STATES.

SPECIAL REPORTS.

Restricted immigration into Canada.—The following telegram was sent from this Bureau:

OCTOBER 14, 1892.

Dr. E. PELLETIER,

Secretary Provincial Board of Health, Montreal, Canada:

Immigration to the United States is completely suspended by reason of the twenty days' quarantine detention. Please inform me if immigration into Canada is still prohibited, and if without exception.

WALTER WYMAN,

Surgeon-General M. H. S.

The following reply has been received:

MONTREAL, CANADA, October 15, 1892.

Dr. WYMAN, *Marine-Hospital Service:*

Continental European immigration still prohibited. Exception made only in favor of British and Scandinavian immigrants.

Dr. E. PELLETIER,

Secretary Provincial Board of Health.

Report of bacteriological examination of suspected cases of cholera at North Tonawanda, N. Y.—The following has been received from the department of health, Buffalo, N. Y.:

OFFICE HEALTH COMMISSIONER,

Buffalo, N. Y., October 15, 1892.

DEAR SIR: I inclose herewith bacteriological report of examination of bedclothing and other articles in the cases of death from supposed Asiatic cholera at Tonawanda, which speaks for itself. I am disappointed that more definite information could not be obtained. Any further developments I will advise you of.

Yours, most respectfully,

ERNEST WENDE, M. D.,

Health Commissioner.

Per ALEX. G. FORTIER.

To the SUPERVISING SURGEON-GENERAL M. H. S.

Inclosure.

BUFFALO, N. Y., October 14, 1892.

SIR: I have the honor to herewith submit a report concerning the results of my bacteriological examination of the suspected cases of Asiatic cholera occurring at North Tonawanda, N. Y., October 4 and 5, 1892. Inasmuch as all clothing, bedding, etc., belonging to and used by the first patient (Frank Kalma) had been destroyed previous to my visit with you to the house of these people, it was impossible to obtain material from this case for examination, and therefore this report relates wholly to the case of the second patient (Baby Kalma). The clothing and bedding of this child were still at hand at the time of our inspection, thirty-six hours after the baby's death. There were no certain traces of alvine discharges about any of these articles. It was impossible to learn definitely whether diapers had been used to dress the child, none being found among its effects. Several pieces of old linen and a large skirt were found, still moist. These pieces of clothing were said to have been used about the child during its last illness, though it was difficult to ascertain whether the skirt had been dampened by vomit or urine or feces. It was stated, however, that the shirt had not been washed. Scrapings were secured from these things and from a pillow on which the child had rested during its sickness, and were at once used to inoculate gelatine and agaragar tubes. These primary cultures were, as soon as possible, subjected to the usual bacteriological analysis, *i. e.*, plating, reinoculating, and cultivation in agar, gelatine, beef tea, etc. A number of common bacteria were isolated, together with a few examples of the ordinary bacillus of feces (*bacillus coli communæ*). There were no specimens of the spirillum of Asiatic cholera. It is evident from the above that, in so far as the material at hand allowed, this examination proves the child's malady to have been not cholera asiatica. The undersigned takes pleasure in here acknowledging his indebtedness to Prof. Roswell Park for the use of his laboratory, where much of this work was done.

I am, yours, respectfully,

W. H. BERGTOLD,

*Adjunct Professor of Pathology,
Medical Department University of Buffalo.*

TO ERNEST WENDE,

Health Commissioner, Buffalo, N. Y.

Cape Charles Quarantine—Arrival of vessel from infected port.—The following telegram has been received:

OCTOBER 16, 1892.

Steamship *Lochmore*, from Poti for Baltimore, arrived to-day. All well. Foul bill of health. Suspicious cases occurred aboard in Poti. Held for disinfection.

HUTTON,
Surgeon.

Disinfection of cargoes of sugar at Philadelphia.

OFFICE OF THE PORT PHYSICIAN,
Philadelphia, October 18, 1892.

DEAR DOCTOR: In reply to your communication of the 14th instant, I herewith transmit copy of special instructions (Exhibit B) prepared

by me for the guidance of laborers who are at work under the observation of spécial medical inspectors in discharging cargoes of sugar from Hamburg at the port of Philadelphia.

As having a pertinent bearing upon these instructions, I desire to call your attention to the fact that the wharf where these cargoes are discharged is inclosed. At the base end of the wharf there is a receiving vat into which sugar from the sacks is directly emptied, and within a few feet of this place is another vat into which the emptied sacks are placed and subjected to a temperature of 212° for twenty minutes. The outer or river end of this wharf was partitioned off in order to provide quarters for the quarantined laborers at night.

Furthermore, water-closets were built upon the wharf in a convenient location for the use of all the quarantined men.

You will readily perceive that the difficulty of quarantining and watching the laborers employed is very much lessened by the fact that the arrangements are such that it is unnecessary for the laborers to leave the wharf at any time during observation, except while they are in the hold of the ship being discharged. Besides the special instructions already mentioned, I inclose copy of a communication (Exhibit A) to the board of health of Philadelphia, concerning cargoes of sugar proceeding from Hamburg, which led to the adoption by our board of health of the precautionary measures under which Hamburg sugar is discharged at this port. * * *

Respectfully yours,

E. O. SHAKESPEARE,
Port Physician.

To the SUPERVISING SURGEON-GENERAL M. H. S.,
Washington, D. C.

EXHIBIT A.

PHILADELPHIA, *September 14, 1892.*

To the Board of Health:

GENTLEMEN: My opinion having been asked by the collector of the port of Philadelphia, and by the health officer of this port, concerning the existence or not of any danger of the introduction of cholera into this port through cargoes of sugar which have come from Hamburg during the presence of the epidemic there, I have expressed the following opinion to those gentlemen concerning this matter. I will first speak of the facts relating to this subject which form the basis of the opinions I have expressed:

First. It is now a well-known fact that cholera existed to a considerable extent in Hamburg, especially among the dock laborers, during the two or three weeks preceding the official declaration of the epidemic by the authorities of that city. It is also a fact that, up to the present time, this class of people, their friends and neighbors, have especially suffered by the epidemic.

Second. I am reliably informed that cargoes of beet-root sugar proceeding from Hamburg are inclosed in sacks; that in the process of loading, these sacks are carried and otherwise handled by the dock laborers of Hamburg. In the case of a sudden and virulent attack of cholera occurring among these laborers while at work it is quite possible that some of the sacks may become infected, either through the

vomit or through other infectious material deposited upon the sacks, or through infectious matter on the hands or clothing of the dock laborers, who are either themselves victims of a sudden attack while at work or in whose household the disease exists.

Third. It is a well-established fact that textile fabrics, especially cotton or linen, when inoculated, either experimentally or accidentally, with the cholera infection, and kept in a moderately damp condition, not only keep alive for a number of days the infectious material placed upon them, but this fabric, under such circumstances, actually furnishes a favorable soil for the growth and rapid development of the infectious matter which was originally placed upon them. It is a well-known fact that sugar is one of the most hygroscopic substances known. As a matter of fact, sacks of sugar placed in the hold of a steamer for transport are constantly absorbing moisture during the continuance of the ocean voyage. When the sacks arrive at their point of destination they are often so moist as to have this condition readily appreciated by the senses of touch and of sight.

Fourth. I would apply these facts to the question in point in the following manner: Unless the sugar contained in the sacks acts as a disinfectant, it is exceedingly probable that a sack infected in the port of Hamburg in the manner above described is surrounded during the voyage with all the conditions favorable for keeping alive and actually multiplying infectious matter received at Hamburg. I know of no such disinfecting power possessed by sugar under such conditions. It is therefore probable that sacks infected during the loading at Hamburg are still infectious when they arrive in the port of Philadelphia. I am inclined to believe that the infectious matter in the sack may not, to any great extent, permeate and multiply in the sugar itself.

Fifth. I am informed that it is the frequent practice to place in the same hold where the sugar is stored quantities of baled rags, and that when this is done direct contact between the baled rags and sacks of sugar is prevented only by means of a tarpaulin thrown over the sugar sacks. I would point out in this connection that, even when the sugar does not proceed from an infected port, the placing of rags from infected ports in the same hold with noninfected sugar in sacks, the two being separated only by a tarpaulin, there is a possibility that in such a case the sugar sacks may become infected from the rags during the voyage. Such a combination of cargo should, in my opinion, be prohibited, especially during the prevalence of cholera in districts where the rags are collected or shipped.

WHAT THE HEALTH AUTHORITIES SHOULD DO, IN MY OPINION, IN THE CASE OF VESSELS ARRIVING FROM INFECTED PORTS WITH A CARGO OF SUGAR OR A MIXED CARGO OF SUGAR AND RAGS.

One of two courses should be followed:

First. The cargo should be refused admission.

Second. Or it should be admitted with the strict enforcement of the following precautions, under the immediate direction and control of one or more medical inspectors assigned to constant duty upon the wharf where the cargo is unloaded. I regard it as impossible to disinfect a sugar cargo in bulk within the hold, either by means of steam heat at a sufficiently high temperature or by means of fumigation with sulphurous acid gas:

(A) The stevedores unloading the sacks of sugar should be extremely careful to eat nothing and drink nothing, to avoid bringing their hands in contact with their mouth, until their hands are first scrupulously cleaned by washing with strong carbolic soap, and afterwards rinsed in a solution of corrosive sublimate in water, one part of the former to two thousand parts of the latter.

(B) The stevedores while at work should wear oilcloth overalls, provided with a cord at the end of the sleeves, so that the latter may be drawn tightly at the wrist.

(C) When the sacks are emptied into the receptacle for the sugar in the refinery they should be immediately disinfected by water or by steam raised to the boiling point, and kept at that temperature for at least twenty minutes.

(D) At the end of the daily work of those engaged in unloading the cargo and transferring it to the vats of the refinery the stevedores should remove their overalls and change their clothing before leaving the locality. They should also scrupulously cleanse and disinfect their hands and faces in the manner above described. It is needless to say that any other person in the employ of the refining company who handles the sacks either before or after emptying, and previous to disinfection, should observe scrupulously the above precautions.

It is my opinion that, even if the sugar could possibly become permeated with the infectious material from the sacks during transportation, that material would be certainly destroyed in the process of refining, for I am informed that the vats into which the sugar is emptied from the sacks are subjected to a boiling temperature for a considerable length of time. This degree of heat would certainly destroy any cholera microbes possibly existing in the sugar.

In commenting upon these two methods of preventing the possibility of cholera being introduced into the port of Philadelphia through infected sugar sacks, I desire to make the following observations: By the adoption of the former procedure, that of exclusion, the possibility of the introduction of cholera in this manner would of course be certainly avoided.

On the other hand, the certainty of the latter procedure, that of allowing the cargo to land under the precautions above described, as a means of guaranteeing the city against the introduction of the disease, would, in case one or more sacks were infected, depend upon the scrupulous and constant care with which the precautions were observed. The certainty of such precautions as an assurance of the city against the danger of infection would be in direct ratio to the intelligence and careful coöperation of the laborers employed in handling the sacks, unless, indeed, the laborers be quarantined.

After having presented for your consideration the facts upon which my opinions concerning this matter are based, and stating the conclusions themselves, I have furnished all necessary data for the exercise of your own judgment. In conclusion, I desire to suggest that if you should decide to adopt in these cases the latter procedure, you select for duty at the wharf where the cargo is unloaded the most intelligent and careful medical inspectors in your employ, and that you exact from them, the laborers over whom they are to watch, and from the officials of the company, the most scrupulous and exact compliance with the precautionary measures above mentioned.

Very respectfully,

E. O. SHAKESPEARE,
Port Physician.

EXHIBIT B.

PHILADELPHIA, September 20, 1892.

*To the Medical Inspectors in charge of sanitary arrangements
for the unloading of cargoes of sugar.*

GENTLEMEN: It is required that the two medical inspectors appointed for the special purpose of supervising and directing the unloading of cargoes of sugar at the port of Philadelphia relieve each other in their tours of duty in such manner that a medical inspector be constantly on duty during the time vessels carrying such cargoes are at the dock, as also during the required period of observation of laborers after the discharge of a cargo shall have been completed.

Quarters, meals, and necessary conveniences will be furnished by the sugar refining company on their ground.

You will see that ample supplies of chloride of lime in solution 10 per cent strong, of carbolic acid in solution 5 per cent strong, carbolic soap strong (commonly known as "dog soap"), a solution of corrosive sublimate in water, 1 part to 2,000, are constantly on hand and available for immediate use.

You will also see that sufficient facilities for washing and disinfecting the hands, such as washbowls and towels, are amply provided for the use of all men employed in the discharge of the cargo who in any way come in contact with the sacks of sugar or emptied sacks (before the latter are disinfected). Each man so engaged should have provided his own cake of soap, washbowl, and towel, which should not be used by another person.

You will see that the refining company provide a cot, with the necessary mattress, covers, warm and comfortable bedclothing, for each individual quarantined.

You will also see that these cots are placed in a healthful and comfortable inclosure, and that the men have their meals supplied to them at proper times, properly prepared, and served by the refining company.

You will use the utmost unrelaxing care in carrying out strictly, without exception and without exercising your own discretion in relaxing them in any case, the following precautionary measures:

(A) Every man engaged in handling sacks of sugar, or empty sacks before they are disinfected, shall be placed in quarantine, and kept there until he is released by my orders. In the case of an individual of his own will refusing to do further work, or if he is discharged by the company, the quarantine of observation will be kept over such a man for five days, at the expiration of which time you will report in writing the sanitary condition of the man during his whole period of quarantine, and upon my order he may be released, after being subjected to a disinfectant bath and disinfection of his clothing. You will see that no person quarantined eats or drinks while on board the steamer. You will also see that the quarantined do not intermingle with the crew of the steamer and do not roam around over the vessel. You will see that they eat nothing and drink nothing during the hours of labor until they have first thoroughly washed their hands with the carbolic soap, and subsequently rinsed them in the above-named solution of corrosive sublimate.

(B) You will see that immediately after the cessation of labor each person carefully washes his hands and face with the carbolic soap, sub-

sequently rinsing them in the corrosive sublimate solution; that he immediately remove his overalls and any portion of his outer clothing which may have come in contact with the sugar sacks.

You will see that the overalls be at once sponged off with the solution of carbolic acid or of corrosive sublimate, and that each suit of overalls and outer clothing removed after work shall be hung up separately, and not handled or used by any other man.

(C) You will keep careful watch over the state of the bowels and general health night and day of every person quarantined, especially noting frequency of the visits of each individual to the water-closet.

(D) You will see that the water-closets are constantly kept clean, and that each man after using them flushes them immediately with at least a pint of one of the above-named disinfectant solutions.

(E) You will report to this office by telephone or messenger any illness among these men forthwith. Whenever a man in quarantine has more than two movements of the bowels per diem you will remove him from his labor and place him in the temporary hospital provided by the refining company, require him to go to bed and remain in bed until his bowel disturbances have completely ceased. I would advise that in treating such bowel disturbances you use either paregoric or one gram doses of salol, or both, at your discretion. In any reports to me of any sickness occurring among these men you will state the particulars and the treatment pursued. If any suspicious case develop among the quarantined (that is, any case resembling cholera morbus or any case of grave diarrhea) you will at once notify this office either by telephone or special messenger, and keep the person isolated in the temporary hospital provided on the grounds, under the constant observation of a hospital nurse, scrupulous care being taken to disinfect immediately all discharges from the bowels or stomach. You will make no attempt to have such a person removed to the general hospitals, but at once arrange for his removal to the Municipal Hospital for Infectious Diseases in one of the ambulances belonging to that institution.

(F) You will see that empty sacks of sugar are, without unnecessary delay, placed in the steaming vat and subjected therein to a temperature of 212° F. for at least twenty minutes, and that these disinfected sugar sacks be not again handled by any one in quarantine.

(G) You will also see that the quarantined do not intermingle or associate with other employes of the sugar refinery, or with any one from the outside during the whole period of detention. You will place in quarantine each and every person who comes in contact with the sugar sacks previous to their disinfection, whether the individual be regularly employed in the handling of the sacks or not.

(H) You will keep a close observation of the crew of every vessel unloading sugar in quarantine during the period of unloading, and report to me at once any diarrheal disturbances or suspicious disease among them.

(I) Immediately after the discharge of sugar cargo from a ship in quarantine you will proceed to fumigate the hold with sulphurous acid gas, using 3 pounds of sulphur per every 1,000 cubic feet of space. When the sulphur fumigation is started you will see that hatches are closely battened down, and not again opened until eight hours after the fumigation began. Thereafter you may release the ship, provided the crew show no evidences of suspicious illness.

(J) After handling or coming in contact with patients under treatment, or of sugar sacks, you will yourselves wash and disinfect your hands. Before leaving the grounds of the company at the end of your tour of duty you will also take the precaution to remove and leave behind you the outer clothing used while on duty.

(K) You will leave a copy of these instructions with the superintendent of the refinery.

(L) A detail of police will be assigned for duty, under your direction, in maintaining strict quarantine and discipline among the men under observation.

You will report to me daily in writing, detailing the state of affairs.

Very respectfully,

E. O. SHAKESPEARE,
Port Physician.

NOTE.—After strictly enforcing the above regulations I felt warranted, by experience based upon the absence of unusual bowel disturbances, and upon the readiness with which the quarantined carried out instructions of the assistant medical inspectors on duty at the refinery, in relaxing these quarantine restrictions in so far as to permit the men under observation to go to their homes at night. This permission was, however, conditioned upon the reporting of each man the next morning for medical inspection. In case any man failed to report, a medical inspector was required to hunt the individual up and determine if there were any suspicious developments during the night or any other disturbances of health which would satisfactorily excuse the man from reporting. In case the man failing to report was perfectly well and refused to return to work, he was arrested and placed again in quarantine under observation. Each person quarantined is kept under observation five days after cessation of work before being released.

VESSELS REMAINING, ARRIVING AT, AND DEPARTING FROM UNITED STATES QUARANTINE STATIONS.

DELAWARE BREAKWATER QUARANTINE.

Week ended October 15, 1892.

Name of vessel.	Date of arrival.	Where from.	Destination.	Treatment of vessel and cargo.	Date of dep'ture.
Barge Willie and Bennie a.....	Sept. 25	Phila.....	.....	Held.....	
Phila. Trans. Light. Co. barge No. 2a.	Sept. 25	.....do.....	.....	.....do.....	
British ss. Tancarville a.....	Oct. 8	Havre.....	Phila.....	Disinfected.....	Oct. 10
Bark Venturoza.....	Oct. 11	Rio de Janeiro.	.....do.....	.....do.....	Oct. 13
American bark Gleneida.....	Oct. 13	Antigua.....	Waiting orders.	.....do.....	Oct. 15
German ss. Procida.....	Oct. 13	Hamburg.....	Phila.....	.....do.....	Oct. 14
British ss. Alleghany.....	Oct. 15	Cette, Fr.....	.....do.....	Detained to pump out European water.	

^a Previously reported.

Twenty-four vessels inspected and passed.

Three vessels detained long enough to pump out water and refill.

VESSELS REMAINING, ARRIVING AT, AND DEPARTING FROM UNITED STATES QUARANTINE STATIONS—Continued.

GULF QUARANTINE.

Week ended October 13, 1892.

British brigantine Estella.....	Oct. 10	Havana	Mobile.....	Held for disinfection.	
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PORT TOWNSEND QUARANTINE.

Week ended October 1, 1892.

Six vessels inspected and passed.

Week ended October 8, 1892.

Eight vessels inspected and passed.

SAN DIEGO QUARANTINE.

Week ended October 12, 1892.

One vessel inspected and passed.

SOUTH ATLANTIC QUARANTINE.

Week ended October 8, 1892.

British bark Talisman a.....	Sept. 25	Plymouth, Eng.	Sapelo.....	Held for disinfection.	Oct. 6
British steamship Malabara...	Sept. 25	Hamburg....	Port Royal...	do.....	Oct. 5

a Previously reported.

Reports of States and yearly and monthly reports of cities.

ALABAMA—*Mobile*.—Month of September, 1892. Population, 31,076. Total deaths, 66, including phthisis pulmonalis, 9; enteric fever, 1; and croup, 2.

CALIFORNIA—*Oakland*.—Month of July, 1892. Population, 60,000. Total deaths, 75, including phthisis pulmonalis, 10, and enteric fever, 1.

Month of August, 1892. Total deaths, 62, including phthisis pulmonalis, 10; enteric fever, 1; and diphtheria, 1.

Month of September, 1892. Total deaths, 54, including phthisis pulmonalis, 7; diphtheria, 2; and croup, 1.

CONNECTICUT.—Reports to the State board of health from 164 towns, having an aggregate population of 781,280, show a total of 1,064 deaths, including phthisis pulmonalis, 111; enteric fever, 45; scarlet fever, 11; diphtheria and croup, 20; measles, 2; and whooping cough, 7.

MASSACHUSETTS—*Brockton*.—Month of September, 1892. Population, 30,000. Total deaths, 30, including 2 from enteric fever.

Northampton.—Month of September, 1892. Population, 16,400. Total deaths, 15, including phthisis pulmonalis 1 and enteric fever 1.

MICHIGAN.—Week ended October 8, 1892. Reports to the State board of health, Lansing, from 67 observers, indicate that cerebrospinal meningitis, puerperal fever, pleuritis, and bronchitis increased, and that membranous croup, whooping cough, scarlet fever, typhomalarial fever, inflammation of kidney, and influenza decreased in area of prevalence.

Diphtheria was reported present during the week at 27 places, scarlet fever at 27, enteric fever at 48, and measles at 1 place.

Abstract of proceedings of Michigan State board of health.

LANSING, October 11, 1892.

The following-named members were present: Arthur Hazlewood, M. D., Grand Rapids; Mason W. Gray, M. D., Pontiac; Prof. Delos Fall, M. D., Albion; Hon. Frank Wells, president *pro tempore*, Lansing, and Henry B. Baker, M. D., secretary, Lansing.

The secretary presented his report of work done in the office during the last quarter. A large part of it was in the direction of efforts for the prevention of the introduction of cholera. On account of the possibility of the introduction of cholera, there was a large number of telegraphic and written communications which were out of the ordinary line of work and needed prompt attention. The three pamphlets on the Restriction and Prevention of Consumption, Scarlet Fever, and Diphtheria were revised and reprinted. There was an unusual call for the pamphlet on Cholera; one city asked for five thousand copies. Not so many were sent, but a large number were distributed. The pamphlet on the Restriction of Cholera was revised, but is not yet reprinted.

Samples of proposed international health tickets were presented from the secretary of the American public health association, who was a committee of the international conference of State boards of health. It is proposed to have these tickets adopted throughout the Continent, the tickets to be issued to immigrants by the inspector at the place of debarkation, and to be carried until taken up by the local inspector at the immigrant's final destination. By a note, in different languages, the immigrant is made to understand that it is to his advantage to keep the ticket in his possession. These tickets are to convey, by parts punched out at starting place and by inspectors along the line, valuable information to all the inspectors, who are to possess the key; such facts as name of possessor of ticket, date of issue, whether or not from an infected locality, the name of the disease with which the immigrant is possibly infected or exposed, where and how long detained, how the person, clothing on the person, and baggage had been disinfected, and other facts which might save detention, disinfection, etc., or lead to careful surveillance for the time of probable danger. The secretary had suggested amendments, and it is hoped that this ticket system may soon be perfected. Those in use at present do not convey the necessary information, and by the Michigan State inspectors very little reliance is placed on them.

Secretary Baker remarked that the cholera having ceased in New York, and the newspapers having much less to say of cholera, the public seem to have concluded that the danger of the introduction of cholera has ceased. A few health officials seem to have the same view. Holding the view that the danger of the introduction of cholera has not lessened, except that the numbers of immigrants are less, and desiring to know the views of prominent and neighboring sanitary officials, the secretary had addressed a circular letter to them. Another point on which he desired to learn their views was the question of the relative danger of the introduction of cholera by immigrants coming from ports not known to be infected compared with immigrants coming in a ship on which cholera had occurred from a port known to be infected—such a vessel, for instance, as the *Normannia*, which was detained so long in the port of New York, and whose passengers had been so dealt with as to make it probable that they would not convey cholera—his own view being that the danger was greatest from baggage which may find its way from some of the many cholera-infected centers to an uninfected port, from which it would come to this country, and because from an uninfected port, pass quarantine without detention or disinfection. In response to his questions, letters were received from Dr. J. T. Reeve, secretary Wisconsin State board; Dr. J. F. Kennedy, secretary Iowa State board; Dr. F. H. DeVaux, secretary North Dakota board; Dr. J. N. McCormack, of Kentucky, president of the international conference State boards of health, and also Dr. Walter Wyman, Supervising Surgeon-General U. S. Marine-Hospital Service, who says: "Your views concerning the great danger of the introduction of cholera through the medium of baggage of immigrants arriving from some port believed to be uninfected, and upon a vessel without any history of infection, are entirely in accord with my own, which I expressed in a letter to the Secretary of the Treasury as early as July 7." Telegrams were received from Dr. Lachapelle, president provincial board of health, Quebec; Dr. C. N. Hewitt, secretary Minnesota State board, and Dr. F. W. Reilly, secretary Illinois State board. Dr. Reilly said: "Without indorsing the principle of a detention quarantine of a fixed number of days under ordinary circumstances, the Illinois State board approves the action of the Michigan State board of health in enforcing a twenty days' quarantine on immigrants from European ports seeking entry into the United States through the Dominion of Canada. This action is approved because it is believed immigrants are shipped through Canada for the purpose of evading the United States twenty days' quarantine. In the judgment of the Illinois board the United States quarantine is defensible on the ground that its effect, if not evaded, would be practically to prohibit immigration until danger of cholera importation had passed."

Besides the communications from State officers already mentioned, other letters were received. U. O. B. Wingate, M. D., health commissioner of Milwaukee, in his reply said: "I certainly do not think that we should relinquish any vigilance in this matter during the winter, and that, as you say, there is a great deal more danger of having the germs introduced into this country from unexpected sources than from vessels that we know are infected. * * * I do not think the Northwest should rely entirely on the quarantine at our seaports, knowing, as we do, how imperfect disinfection is at certain stations, but that a double quarantine and disinfection should be established in the country

to protect this part, for we are peculiarly situated in regard to exposure, being subjected to the enormous number of immigrants that are locating in and passing through the Northwest. I believe with you that this is not a matter confined to the World's Fair alone, but it is a matter which affects the whole prosperity of this part of the country." John D. Ware, M. D., health commissioner of Chicago, in his reply said: "I think as you do in relation to immigration to this country by the way of the St. Lawrence and points in Canada. I believe that your order relative to quarantine is a most excellent one, and so far as this department is concerned I wish that it was carried out with all ports of entry. * * * I am also greatly in favor of the methods of inspection and disinfection, no matter what the cost may be of the maintenance of such quarantines and inspection. The money could not be more profitably spent, and the probable good results from such a course would be beyond all computation. * * * As you say, many seem to think that with the cessation of cholera in the port of New York danger no longer exists from the introduction of cholera. I believe that there is danger, even at present, not only from those immigrants and the baggage of such immigrants as may be known to have been infected or those immigrants who may have come from infected ships, but those who have not been on infected ships who may by some chance have come in contact with the germs."

The general tenor of the letters and telegrams is that the danger of cholera is not yet passed; that it will probably be greater next summer; that a danger to be especially guarded against is by baggage in some way infected brought in by immigrants not sick in uninfected vessels and from uninfected ports, therefore being allowed to pass quarantine at the seaboard without disinfection; that until seaboard quarantines are more perfect and the system of tickets of sanitary information more satisfactory it seems important to have a line of inspection and of disinfection from Sault St. Marie southward to Lake Erie, and preferably as far south as Kentucky.

The subject was thoroughly discussed. The following resolution was adopted:

"Resolved, That the quarantine orders and rules of the Michigan State board of health heretofore issued, including the published requirements formulated by the executive committee of the board, be continued, and that they be extended so as to apply to all immigrants entering Michigan, and that the executive committee be continued, with power to act."

It takes time to organize an efficient system of inspection and disinfection; unexpected difficulties are to be met and overcome. One surprise to the State board of health was the opposition to its published rules by the Detroit board of health. However, it seems now that the inspection and disinfection are proceeding quite satisfactorily; the United States inspectors are working in harmony with the State board's rules, the customs officers coöperate, the railroad companies supply the steam for disinfection, and their officers and employes give substantial aid. The spirit of the railroad companies is well shown by a letter from the district passenger agent, C. Sheehy, of the Canadian Pacific Railway Company at Detroit, as follows: "This company is perfectly satisfied with the arrangements that were made here for the passing of immigrants. We have carried out as best we could all the recommendations and suggestions made by yourself and the Hon. Mr.

Wells when you were in Detroit and Windsor. If there is anything that we can do or have done to aid or assist your board in carrying out your rules and regulations we will make every effort in our power to comply with your wishes and instructions."

Before adjourning the board appointed a committee to memorialize the President of the United States for a more effective health organization for the United States.

MINNESOTA—*Minneapolis*.—Month of September, 1892. Population, 164,738. Total deaths, 208, including phthisis pulmonalis, 23; enteric fever, 12; scarlet fever, 3; diphtheria, 4, and whooping cough, 3.

NEW YORK—*Rochester*.—Month of September, 1892. Population, 144,834. Total deaths, 233, including phthisis pulmonalis, 16; enteric fever, 16; scarlet fever, 9; diphtheria, 6; and croup, 5.

TENNESSEE—*Chattanooga*.—Month of September, 1892. Population, 40,000. Total deaths, 50, including phthisis pulmonalis, 8; diphtheria, 3; and croup, 1.

Memphis.—Month of July, 1892. Population, 61,500. Total deaths, 111, including phthisis pulmonalis, 16; enteric fever, 2; scarlet fever, 1; and whooping cough, 1.

Month of August, 1892. Total deaths, 102, including phthisis pulmonalis, 10; enteric fever, 4; and diphtheria, 2.

TEXAS—*San Antonio*.—Month of September, 1892. Population, 38,640. Total deaths, 102, including phthisis pulmonalis, 13; enteric fever, 3; and croup, 1.

UTAH—*Salt Lake City*.—Month of September, 1892. Estimated population, 60,000. Total deaths, 70, including phthisis pulmonalis, 5; enteric fever, 5; and croup, 1.

WISCONSIN—*Milwaukee*.—Month of September, 1892. Estimated population, 247,000. Total deaths, 410, including enteric fever, 12; scarlet fever, 1; diphtheria, 17; and measles, 3.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

[illegible]

Table of temperature and rainfall, week ended October 10, 1892.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Deficiency.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me.....	49		1	1.04		.56
Portland, Me.....	51			.91		.33
Boston, Mass.....	55			.95	.95	
Block Island, R. I.....	57		2	.95	.08	
Woods Holl, Mass.....	58		3	.75	.63	
Middle Atlantic States:						
Albany, N. Y.....	55		2	.83	.27	
New York, N. Y.....	59		3	.77		.28
Philadelphia, Pa.....	60		3	.63		.37
Atlantic City, N. J.....	60		5	.76		.69
Baltimore, Md.....	61		5	.70		.46
Washington, D. C.....	61		4	.77		.44
Lynchburg, Va.....	62		3	.83		.79
Norfolk, Va.....	65		4	.91		.61
South Atlantic States:						
Charlotte, N. C.....						
Wilmington, N. C.....	67		3	1.06		.84
Charleston, S. C.....	70		1	1.08		1.00
Augusta, Ga.....	69		4	.59		.56
Savannah, Ga.....	70		2	.94		.94
Jacksonville, Fla.....	74		1	1.59		1.57
Key West, Fla.....	80		1	1.42	.08	
Gulf States:						
Atlanta, Ga.....	65		2	.58		.35
Pensacola, Fla.....	73		2	.84		.81
Mobile, Ala.....	71		1	.74		.42
Montgomery, Ala.....	70		3	.57		.57
Vicksburg, Miss.....	70		1	.58		.58
New Orleans, La.....	74		1	.74		.74
Shreveport, La.....	70			.66		.66
Fort Smith, Ark.....	66			.77		.77
Little Rock, Ark.....	67		1	.48		.44
Palestine, Tex.....	69	2		.84		.84
Galveston, Tex.....	75	1		1.12		1.12
San Antonio, Tex.....	72	1		.51		.20
Corpus Christi, Tex.....	75			.83		.78
Ohio Valley and Tennessee:						
Memphis, Tenn.....	66		2	.59		.41
Nashville, Tenn.....	64		4	.59		.57
Chattanooga, Tenn.....	65		4	.73		.61
Knoxville, Tenn.....	63		5	.70		.32
Louisville, Ky.....	63		4	.63		.60
Indianapolis, Ind.....	58		3	.70		.65
Cincinnati, Ohio.....	61		5	.56		.39
Columbus, Ohio.....	58		5	.63		.31
Pittsburg, Pa.....	59		6	.56		.30
Lake Region:						
Oswego, N. Y.....	53		3	.77		.04
Rochester, N. Y.....	53		4	.68		.52
Buffalo, N. Y.....	54		5	.84		.40
Erie, Pa.....	56		5	.98		.66
Cleveland, Ohio.....	56		5	.70		.26
Sandusky, Ohio.....	57		4	.70		.60
Toledo, Ohio.....	56		5	.56		.52
Detroit, Mich.....	56		6	.63		.63
Port Huron, Mich.....	53		5	.65		.55
Alpena, Mich.....	49		3	.98		.39
Marquette, Mich.....	49			.86		.02
Grand Haven, Mich.....	53		3	.84		.65
Milwaukee, Wis.....	54		2	.60		.60
Chicago, Ill.....	56		4	.79		.79
Duluth, Minn.....	48	3		.76		.76
Upper Mississippi Valley:						
St. Paul, Minn.....	52	2		.51		.51
La Crosse, Wis.....	53			.65		.65
Dubuque, Iowa.....	55	1		.80		.50
Davenport, Iowa.....	56	2		.70		.70

*The figures in these columns represent the average daily departure. To obtain the average weekly departure these should be multiplied by seven.

Table of temperature and rainfall, week ended October 10, 1892—Continued.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Deficiency.	Normal.	Excess.	Deficiency.
Upper Mississippi Valley—Cont'd.						
Des Moines, Iowa.....	56	3	.....	.88	.....	.88
Keokuk, Iowa.....	58	2	.....	.83	.....	.83
Springfield, Ill.....	59	.....	1	.80	.....	.80
Cairo, Ill.....	63	.....	2	.56	.....	.56
St. Louis, Mo.....	62	1	.....	.62	.....	.62
Missouri Valley:						
Springfield, Mo.....	61	1	.....	.74	.....	.74
Kansas City, Mo.....	60	3	.....	.91	.....	.91
Concordia, Kans.....	59	5	.....	.41	.....	.41
Omaha, Nebr.....	57	6	.....	.69	.....	.69
Yankton, S. Dak.....	54	6	.....	.41	.....	.41
Valentine, Nebr.....	53	6	.....	.35	.....	.35
Leavenworth, Kans.....	60	2	.....	.79	.....	.79
Huron, S. Dak.....	51	6	.....	.35	.....	.35
Pierre, S. Dak.....	54	8	.....	.14	.....	.14
Rapid City, S. Dak.....	49	13	.....	.14	.....	.12
Extreme Northwest:						
Moorhead, Minn.....	44	7	.....	.49	.....	.49
St. Vincent, Minn.....	48	9	.....	.28	.....	.28
Bismarck, N. Dak.....	48	11	.....	.23	.....	.23
Fort Buford, N. Dak.....	48	.....	.....	.....	.....	.....
Rocky Mountain Slope:						
Havre, Mont.....	47	12	.....	.14	.....	.14
Helena, Mont.....	49	9	.....	.21	.....	.02
Spokane, Wash.....	51	12	.....	.47	.....	.12
Salt Lake City, Utah.....	55	8	.....	.57	.....	.10
Winnemucca, Nev.....	51	7	.....	.08	.17	.....
Cheyenne, Wyo.....	.....	.....	.....	.....	.....	.....
North Platte, Nebr.....	54	5	.....	.28	.....	.28
Denver, Colo.....	54	4	.....	.14	.....	.14
Montrose, Colo.....	54	6	.....	.22	.....	.22
Pueblo, Colo.....	56	4	.....	.07	.....	.06
Dodge City, Kans.....	60	3	.....	.35	.....	.35
Abilene, Tex.....	68	1	.....	.70	.....	.70
El Paso, Tex.....	67	2	.....	.28	.....	.27
Santa Fe, N. Mex.....	53	4	.....	.28	.....	.28
Tucson, Ariz.....	.....	.....	.....	.....	.....	.....
Pacific Coast:						
Olympia, Wash.....	.....	.....	.....	.....	.....	.....
Portland, Oregon.....	.....	.....	.....	.....	.....	.....
Roseburg, Oregon.....	62	6	.....	.53	.01	.....
Red Bluff, Cal.....	66	4	.....	.26	.22	.....
Sacramento, Cal.....	64	5	.....	.19	.13	.....
San Francisco, Cal.....	.....	.....	.....	.....	.....	.....
Los Angeles, Cal.....	66	3	.....	.21	.....	.21
San Diego, Cal.....	65	3	.....	.07	.....	.02
Yuma, Ariz.....	76	4	.....	.07	.....	.07

* The figures in these columns represent the average daily departure. To obtain the average weekly departure these should be multiplied by seven.

FOREIGN.

(Reports received through the Department of State and other channels.)

CHOLERA.

Increase of cholera at Teheran, Persia.

CONSULATE-GENERAL OF THE UNITED STATES,
Teheran, August 25, 1892.

SIR: As I have stated in previous dispatches, it is impossible to get at anything like reliable statistics. This, however, is now practically unnecessary. If the scourge keeps up its virulence much longer it bids fair to depopulate Teheran. The death rate of 400 daily which I wired was way below the mark; 1,000 would have been nearer the truth. Mr. John Tyler, the dragoman of this legation, who has been indefatigable in his efforts to alleviate suffering, and who has visited every part of the city, is satisfied that no scourge has ever been so bad in Teheran. The panic among the people still continues. The remarkable increased mortality commenced on August 19. According to European physicians, this was due in a large measure to the order of the tuollahs (priests) to the people to go on a pilgrimage to Shab Abdul Azun, a shrine near the city. It is estimated that 1,500 people complied. Thousands were thus exposed to infection who might otherwise have escaped had they remained quiet in their homes. Now not only every quarter of the city is infected, but all the adjacent villages as well. Some five or six Europeans have succumbed. The wife of the German chargé d'affaires is critically ill at this writing.

The American hospital is doing its utmost. It is the only institution of its kind in Teheran, and is the best organized of any in Asia. As I have stated, they are short of funds. Some friends have come to their assistance. The general manager of the Imperial Bank of Persia intimated that if I would officially authorize him to do so he would cause a subscription to be opened in London. This I courteously declined. I understand, however, that the manager, Mr. Rabinno, has nevertheless telegraphed to England for funds on his own account.

The missionaries are extremely grateful to the Department for publishing my telegrams. Certainly it was hardly expected that the Government could aid officially further than to use its kind offices in bringing the case to public notice.

The hospital staff has now treated some 60 patients in the hospital proper, and over 1,200 others who could not be taken in on account of lack of room.

The death rate among the patients has been large since many of them are received in a moribund state. The death rate for the past few days in Teheran has certainly not been below 800 per day.

The epidemic seems to have shifted from the east side to the west side of the town, where it is now very severe.

I am, sir, your obedient servant,

WILLIAMS C. FOX,

United States Vice-Consul, in charge.

To the Hon. WILLIAM F. WHARTON,
Assistant Secretary of State, Washington, D. C.

Cholera at Warsaw, Russia.—The following cablegram has been received :

WASHINGTON, D. C., October 12, 1892.

Our consul at Warsaw, Russia, telegraphs this date : "Cholera."

JOHN W. FOSTER,
Secretary of State.

To the Hon. THE SECRETARY OF THE TREASURY.

Cholera at Batoum, Russia.

UNITED STATES CONSULATE,
Batoum, August 31, 1892.

SIR: In connection with the monthly abstract of bills of health inclosed, I beg to state that I have been unable to fill in the abstract as required, as the authorities have not published any statistics whatever of the mortality in this place.

From a reliable source I am informed that from the 12th of July to the end of this month there have been about 20 cases of cholera, of which 12 resulted in death. Only 1 of these was a resident of Batoum, the remaining 11 having been workmen from Baku.

There has not been a single case of cholera here for now over a fortnight.

I am, sir, your obedient servant,

T. HARPER HALL,
Acting Consul.

To the Hon. WILLIAM F. WHARTON,
Assistant Secretary of State.

Sanitary commission at Constantinople—Report of the United States sanitary commissioner.

REPORT NO. 52.

Though cholera is raging nearly all over Europe, the Turkish Empire, we may say, enjoys good health. I have already mentioned in my last report that a few cholera cases and deaths have been registered in the lazaretto of Platana, but without any ill-consequence on the surrounding country.

On the 31st of August a man coming from Kars, after a stay of ten days in the lazaretto of Kerelek, on the Russo-Turkish boundary line, was attacked by cholera, and died at Hassan Kali, near Erzeroum, in his own home. Immediately the authorities took all the necessary steps of disinfection and separation of the healthy inhabitants of the village, and the companions of the dead have been again submitted to fifteen days' quarantine. On the 3d instant 3 more deaths from cholera were registered, and on the 5th official notification was given that cholera had made its appearance at Anzelek, four hours distant from Hassan Kale and four hours distant from Erzeroum. Four women died at Zeklek and 2 men at Vetibaba. These villages have been surrounded by quarantine cordons in order to preserve Erzeroum. On the 6th instant it was announced that on the 4th of the same month cholera had made its appearance at Soheia. It is not known whether cholera is limited only to this village or to the villages of Beni-jeims, or whether it rages all over the Yemen. Sanitary cordons have been ordered, and the province of Yemen is submitted to ten days' quarantine.

In order to prevent an invasion of cholera from Europe, it has been decided to establish a lazaretto at Umstafa-pasha for the passengers coming by railroad from Europe. For the same purpose another lazaretto is to be established at Zibefche, on the boundary line of Albania. By sea a quarantine of ten days has been ordered against ships coming from the North Sea, from Cronstadt, in the Gulf of Finland, to Cherbourg, the latter town not included, not excepting the English ports of Glasgow, Liverpool, Swansea, Gainsby, Shields, and London. Ships will undergo the quarantine at Clazomenes or at Beirut. The same quarantine of ten days has been ordered for ships coming from the African coast from Cape Guardafui up to Mattawa, this latter port not included, and for ships coming from Curachu, in Belluchistan, and the ports of Persia, Abushir, Benderabas, etc. Another quarantine of five days is imposed on ships carrying passengers and coming from the Mediterranean ports of France, Italy, and Austria.

SPIRIDION C. ZAVITZIANO.

CONSTANTINOPLE, September 9, 1892.

Typhus fever in Zacatecas, Mexico.—The United States sanitary inspector at El Paso sends the following report, dated October 14, 1892:

I have the honor to report that I have reliable advices from Zacatecas, Mexico, to the effect that typhus is raging in that city, 200 cases being there last Sunday, and many deaths daily are the result. Zacatecas is about 600 miles south from El Paso, Tex., on the Mexican Central road, and has a population of from 60,000 to 70,000 inhabitants. The prevalence of the disease, I am informed, is due to the lack of food among the poorer classes and bad sanitary conditions.

To the SUPERVISING SURGEON-GENERAL M. H. S.

Letter from United States consul at Calcutta relative to shipment of merchandise from that district.

UNITED STATES CONSULATE-GENERAL,
Calcutta, September 6, 1892.

SIR: In continuation of dispatch No. 83, dated August 22, 1892, and referring to circular issued July 8 from the office of the Supervising Surgeon-General, just received, I desire to make additional statements and to ask for instructions, for if Calcutta is to be included among the infected ports, and the provisions of the circular are strictly enforced, trade between India and America will almost entirely cease.

It is possible that Calcutta is named among the infected districts where cholera prevails through failure on my part to mention a change of method in making sanitary reports, caused by my fear of appearing to cast a reflection on the actions of officials preceding me.

My predecessors were in the habit of confining their returns to urban Calcutta or to that division of the city occupied largely by Europeans and the wealthier inhabitants, not mentioning suburban Calcutta, which is as much a portion of the city as that section of Manhattan Island lying south of Fourteenth street is a part of New York. Although the returns of the two areas furnished to this office by the medical authorities are compiled on separate sheets, yet the inhabitants are as accurately known and the vital statistics are as carefully computed in one as in the other.

Of course, consolidating the two reports, while it largely augmented the number of inhabitants, greatly increased also the mortality table, so that a casual comparison of recent with former reports might show a startling growth of the death roll. The fact is, however, that Calcutta at present is uncommonly healthy, and is suffering less from cholera now than for a long time, the last week's returns showing only nine deaths, which is less than the average in urban for five, and in suburban for three years.

Cholera does not seem to emanate from this city; for a year and a half ago over 500 persons died in one week from this disease; yet, although goods were exported very largely at that time to all parts of the world, not one case was reported as having resulted from these shipments. It is true that the malady exists here continuously, not as an epidemic, however; and the writer might succumb to it to-night and be buried in the morning—which, taken in connection with what has been written above, might be enjoyed by some as a joke at his expense—but that would have no bearing on the fact that the disease in Calcutta at least confines itself to this locality, and, either through its peculiar character or from the watchfulness of port officials, terminates where it arises.

The shippers assert that the profit on shipments will not warrant the expense of disinfection, and have consequently been informed that no invoices of articles received from infected districts will be certified in this office nor at any agency in this consulate-general. They reply with grim humor, highly amusing to themselves but provoking to me, that they wish to make no mistakes, and ask me to name the districts infected with cholera.

In my opinion, there is no province in India where sporadic cases of cholera do not appear continually; nor is there a district which contributes articles for shipment from this part where it can at present be said to exist in epidemic form. It did rage in Cashmere, a far off dependency of this Empire, and also in regions contiguous to the mouth of the Indus, but if any articles of commerce were to be exported from these lands they would be far more likely to seek an outlet through Karrachee or Bombay than through ports in the Bay of Bengal.

To those who have asked I have given certificates in regard to the health of Calcutta and the adjacent country, hoping they would satisfy the medical and customs authorities and induce them to allow goods to reach consignees without detention.

While fully aware that I am sent here in the interests of commerce, and consequently exceedingly anxious that traffic shall not be interfered with; I also realize that health and life are of supreme importance, and that negligence resulting in the introduction of cholera to America would be the blackest of crimes.

I am, sir, your obedient servant,

SAMUEL MERRILL,
Consul-General.

To the Hon. WILLIAM F. WHARTON,
Assistant Secretary of State.

UNITED STATES CONSULATE-GENERAL,
Calcutta, September 13, 1892.

SIR: I have the honor to acknowledge the receipt of the following telegraphic dispatch dated the 7th instant: "Issue certificates for hides in accordance with Treasury circular July 8."

I have instructed exporters to thoroughly disinfect all articles for shipment mentioned in circular issued July 8, and to make oath that directions have been strictly observed.

All captains of ships loaded with goods liable to convey infection, bound for the United States, are required to swear that they have disinfected their vessels in accordance with methods prescribed in the circular.

As the weekly deaths from cholera in Madras are from five to ten times as numerous as in Calcutta, I have ordered the consular agent to enforce rigid disinfection at that port.

The circular issued July 8 was fifty-four days in reaching me, which will explain why systematic disinfection was not established at an earlier date.

Merchants are desirous of copies of this circular, and, as only one was sent me, at least fifty are needed to meet their demands.

There were 5 deaths from cholera in Calcutta three weeks ago, 9 two weeks since, and 2 during this last week.

I am, sir, your obedient servant,

SAMUEL MERRILL,
Consul-General.

Hon. WILLIAM F. WHARTON,
Assistant Secretary of State, Washington, D. C.

Instructions in regard to measures to be observed in railway traffic while the cholera danger threatens.

The following translation has been received from the United States consul at Berlin:

[Translation from the Reichsanzeiger of September 10, 1892.]

On the ground of the results of scientific investigation, and in view of experience recently gained, the imperial chancellor has empowered a committee of representatives of the interested federal governments—working with the advice of medical authorities—to examine the measures adopted on account of the cholera. This examination has shown that measures already adopted for the railway traffic are in general still to be regarded as sufficient, and require only small alterations and additions. For gaining a better view of the regulations to be observed, these are brought together in the instructions printed below relative to measures to be observed in railway traffic while the cholera danger lasts.

INSTRUCTION IN REGARD TO MEASURES TO BE OBSERVED IN RAILWAY TRAFFIC WHILE THE CHOLERA DANGER CONTINUES.

(1) By the sanitary officials the railway division authorities must be informed what stations are supplied with the necessary means for transporting the sick and offer a suitable place for their reception. At all these stations, which hereafter in these instructions will be designated as patient-delivery stations, the railway authorities must provide the necessary rooms for the temporary reception of persons taken ill in railway trains while awaiting transfer to a hospital. When a special apartment can not be made available, it is sufficient to choose a room which, in case of necessity, can be at once cleared for the reception of patients. In case of danger, while waiting to be taken away, the patient is to be switched off on a side track in the car in which he has been transported.

(2) At a number of these stations, and especially during the approach of cholera toward the German frontier at those frontier stations where a considerable number of travelers arrive from the infected land, and, upon the breaking out of the cholera in this country, at all important railway centers in the threatened neighborhoods, by order of the sanitary officials, physicians must always be in attendance when trains arrive in order to render assistance to persons sick, or suspected of being sick, with cholera. A strict medical supervision of travelers is, except where special regulations are issued for frontier districts, not the duty of these physicians; they must, on the contrary, as a rule, restrict themselves to rendering assistance when it is requested by sick travelers or when information is given them in regard to cases of sickness or suspected sickness. This information must at once be given by conductors of arriving trains (based upon their own observation, the reports of guards, or the statements of travelers). Stations at which, upon the arrival of trains, physicians are always present, will henceforth in these instructions be designated as examination stations.

(3) The choice of examination stations shall be made by the sanitary authorities with consent of the directors of the railway divisions; this shall be done with due reference to the spread of the epidemic and to the conditions of traffic. So far as possible stations will be chosen where long-enough stops are provided for in the time table.

(4) At the examination stations the rooms necessary for the examination of patients, which, as far as possible, are to be supplied with a closet, or are to have one directly accessible, are to be supplied by the railway management so far as they are available.

(5) A list of all delivery stations (inclusive of examination stations), arranged in the geographical order of the station, is to be given to the conductor of every passenger train. The conductor must deliver persons who on the journey have become sick with suspicious symptoms at the next station on the list, irrespective of whether or not this is also an examination station. For this purpose guards must at once give notice to the conductor of every cholera-suspicious case appearing during the journey.

Cholera suspicious is every person who, in times of cholera, suffers from vomiting and diarrhea. There are also some cholera cases which terminate fatally in which vomiting and diarrhea do not appear. Such cases can be recognized in the great weakness and faintness which often, very suddenly, overcome the persons affected. Already during the journey every effort is to be made to ascertain the identity of the sick person, whence he comes, and what is the goal of his journey.

(6) The first care for the patient is to see that he is comfortably arranged, and this is the business of the guard under whose supervision that particular car is placed.

(7) The conductor of every passenger train is to be supplied with a drop-bottle containing about 30^{ccm} of a mixture of like parts of simple tincture of opium and ether wine-spirits, from which are to be given to persons taken sick 20 to 30 drops, best on sugar. To children are to be given only so many drops as they are years old, none being given to children under 2 years old.

(8) If before arrival at a delivery station the train halts at an intermediate station the conductor must at once report the matter to the station official, who must, without delay, telegraph to the delivery station, so that if possible the patient can be directly received from the

train itself by the hospital authorities, the police, or the medical officials.

(9) In so far as the leaving of the train by cholera-suspicious persons at other than delivery stations is forbidden by police order, the patient who attempts to leave the train at an earlier station must be prevented from doing so by the railway personnel, irrespective of the fact that this is the goal of his journey or that it is his intention to interrupt his journey here. In so far as such police orders do not exist, the decision in regard to the permissibility of his leaving the train is to be left entirely to the police watch, if there is one at the station, otherwise the sick person, unless there is some police order preventing it, can not be prevented from leaving the train; the conductor, however, must notify the official on duty at the station when the sick person leaves the train, so that this official, if the sick person is unwilling to remain at the station until the arrival of a physician, where he must be isolated as far as possible, can ascertain his name, place, and house of residence, and without delay notify the nearest police officials in regard to these facts.

(10) So soon as a case, or the suspicion of a case, of cholera appears, all of his fellow travelers, excepting friends of the sick person who wish to remain to take care of him, must be removed from the car section (coupé) in which the sick person is, and when several sections have one closet in common from all of these sections, and placed in another compartment, away from other travelers. Upon arrival at the patient-delivery station, those persons who have been in the same compartment with the sick person are at once to be pointed out to any physician who may be present, in order that he may give them the necessary instructions.

Furthermore, upon the appearance of suspicious cases, the railway personnel must act with the greatest caution and calmness, in order to avoid giving rise to unnecessary anxiety among the passengers or on the part of the general public.

(11) The car in which there has been a cholera patient, or a person suspected of being a cholera patient, is to be at once put out of use and to be surrendered at the next suitable station for disinfection. The detailed instructions in regard to this disinfection are given in inclosure I, instructions in regard to the treatment of railway passenger and sleeping cars during times of cholera danger.

(12) All railway officials are to be made thoroughly acquainted in regard to the instructions concerning cholera disinfection in inclosure II (already published in No. 205 of the Reichs- und Staats-Anzeiger); in especial are these instructions to be given to the stations which are supplied with suitable disinfection materials.

Train officials must for their own safety carefully disinfect themselves after coming in contact with the ejections of sick persons, and should call the attention of travelers in like manner unpurified to the necessity of disinfection. In order that the disinfection can take place, on such trains as halt only at long intervals during the journey, the conductors of such trains are to be supplied with a sufficient supply of chloride of lime and potash soap.

All persons who come in contact with cholera patients must, until after the prescribed cleansing of their hands has taken place, absolutely abstain from bringing the latter in contact with the face, as by direct introduction of the disease stuff through the mouth into the body infec-

tion may occur. It must, therefore, be strictly avoided—during or after intercourse with the sick—before disinfection has taken place, to smoke or eat or drink.

(13) Special care must be given to the maintenance of absolute cleanliness in all water-closets, urinals, etc., in the stations; they must be disinfected daily in accordance with the instructions, inclosure II, with milk of lime (see inclosure II, under I 1). The seats of closets are to be cleaned at least once a day by washing them with a solution of potash soap (see I 3 of the instructions, inclosure II). The floors of closets are, so far as they will stand this treatment, to be disinfected by repeated deluging with milk of lime. In like manner the space between the rails, when at stations it has been impurified through the use of closets in the train, is at once to be thoroughly disinfected by being deluged with milk of lime.

(14) A limitation of railway baggage and freight traffic, except in regard to articles whose importation has been prohibited, is not to be recommended. A disinfection of baggage and wares is not to be undertaken unless specially prescribed in individual cases (at customs-houses, for emigrant's baggage).

(15) All officials of the railway department must implicitly obey the orders of police officials and supervising physicians, so far as they are able and their official duties will permit, and must, without waiting to be asked, give the same all necessary information. Information is always to be at once given to the sanitary authorities in regard to all railway service instructions concerning measures against the cholera danger and in regard to all orders given and arrangements made.

(16) An extract from these instructions, containing the rules of action for the railway personnel in event of the appearance of cholera suspicious cases during railway trips, is given in inclosure III. A copy thereof is to be given to every train official on every passenger train.

(17) Of every case confirmed by a physician as cholera the station-master must at once notify in writing the business managers to whom he is subordinate (*betriebsamt*) and the local police authorities, giving, if it can be obtained, information on the following points:

- (a) Date and place of the beginning of the illness.
- (b) Name, sex, age, rank, or business of the patient.
- (c) Whence the patient was traveling.

INCLOSURE I.

INSTRUCTION CONCERNING THE TREATMENT OF RAILWAY PASSENGER AND SLEEPING CARS DURING THE CONTINUANCE OF THE CHOLERA DANGER.

I.—Treatment of ordinary passenger cars.

(1) During the continuance of a cholera epidemic in this country or in a neighboring territory, care must be taken that passenger cars be thoroughly cleaned and aired.

Train closets must be regularly disinfected and the tubes, etc., painted with milk of lime, the seats being cleansed with potash soap solution (see paragraph 4).

(2) A passenger car in which there has been a cholera patient or some one suspected of being a cholera patient must be at once put out of use and delivered at the next suitable station for disinfection, which is to be effected as follows:

In passenger cars, first and second class, the parts soiled with ejections of the patient—the upholstered portions also—are to be carefully and

repeatedly rubbed with rags moistened with potash soap solution (see paragraph 4); then the infected car is to be subjected to thorough cleansing, and then kept in a warm, airy, and dry room for at least six days.

In passenger cars, third and fourth class, the inner and outer side walls of the car, the floors, seats, and steps are to be washed with potash soap solution; especially must the places soiled with ejections of the patient be carefully and repeatedly rubbed; then the infected car must be kept for at least twenty-four hours in a warm, airy, and dry room. The rags used in cleaning soiled places are to be burnt.

(3) In case of the transportation of crowds of persons in third and fourth class cars from a district seized by the cholera, even when during the journey no case of sickness has occurred, special care must be given to the keeping of the car clean. If possible, at the end of every such journey such cars shall be treated in the manner provided in paragraph 2 for passenger cars, third and fourth class. But the cars, as soon as they have become dry, can be used again.

(4) For preparing milk of lime, take 1 liter of crushed pure burnt lime, so-called fat lime, and mix it with 4 liters of water, in the following manner:

Pour about three-fourths liter of water into the vessel intended for the mixture, and add thereto the lime. After the lime has drunk up the water, and thereby has fallen into powder, pour in the rest of the water and stir the mixture into milk of lime.

The same is, unless it is to be used soon, to be preserved in a well-closed vessel and shaken before being used.

To prepare potash soap solution, take 3 parts of soap (so-called soft soap or green or black soap) and dissolve it in 100 parts of hot water (e. g., one-half kilogram of soap in 17 liters of water).

II.—*Treatment of sleeping cars and the furniture thereof.*

(1) If during the journey regions are traversed in which cases of cholera have occurred, at the end of the trip the linen used must be disinfected. For this purpose, the same must be left for at least twenty-four hours in a solution of potash soap (see I, paragraph 4) then it is to be rinsed with water and cleaned. By linen is to be understood the sheets, the covers of beds and pillows, the spreads, as well as the towels.

(2) The closets are to be treated as fixed under I, paragraph 1.

(3) If a sleeping car has been used by a cholera patient, or a person suspected of being a cholera patient, in addition to the above the car must be disinfected. This is to be effected in the manner prescribed in I, paragraph 2; but the pillows, covers, and movable mattresses used by the sick person, after having been thoroughly moistened with potash-soap solution, must be disinfected in steam apparatuses. Suitable for this purpose are apparatuses prepared for making steam at 100° C., and also those in which steam is used under pressure (not under 0.1 atmosphere).

(4) In the event that it shall seem necessary to entirely discontinue the running of sleeping cars, the decision remains open.

III.—General provisions.

(1) The foregoing instructions find analogous application in event of the sickening of train and postal officials in the baggage and postal cars used by them.

(2) The workmen authorized to disinfect must, every time they come in contact with infected things, take care to disinfect themselves. (See instructions in regard to disinfection.)

INCLOSURE II, in regard to "How to disinfect in connection with cholera," has already been published in No. 205 of the *Reichs und Staats-Anzeiger*.

INCLOSURE III.

INSTRUCTIONS TO THE RAILWAY PERSONNEL IN REGARD TO HOW TO ACT WHEN SUSPECTED CASES OF CHOLERA APPEAR UPON MOVING TRAINS.

(1) Cholera suspicious is every person who, in times of cholera, suffers from vomiting and diarrhea. There are also some cholera cases which terminate fatally in which vomiting and diarrhea do not appear. Such cases can be recognized in the great weakness and faintness which, often very suddenly, overcome the persons affected.

(2) Of every cholera-suspicious case which appears during the railway journey the guard must at once give notice to the conductor.

(3) The conductor must deliver the sick person to the next railway station which is supplied with the necessary means for transporting the sick, and which offers proper accommodation for the patient; if before the arrival at this station the train halts at an intermediate station, the conductor, immediately upon arrival, must notify the station official on duty, so that he can, without delay, telegraph the information to the delivery station. The stations at which patients can be delivered up will be made known to the conductor.

In so far as the leaving of the train by cholera-suspicious persons at other than delivery stations is forbidden by police order, the patient who attempts to leave the train at an earlier station must be prevented from doing so by the railway personnel, irrespective of the fact that this is the goal of his journey or that it is his intention to interrupt his journey here. In so far as such police orders do not exist, the decision in regard to the permissibility of his leaving the train is to be left entirely to the police watch, if there is one at the station; otherwise the sick person, unless there is some police order preventing it, can not be prevented from leaving the train; the conductor must, however, notify the official on duty at the station where the sick person leaves the train, so that this official, if the sick person is unwilling to remain at the station until the arrival of a physician—where he must be isolated as far as possible—can ascertain his name, place, and house of residence, and, without delay, notify the nearest police officials in regard to these facts.

(4) So soon as a case or the suspicion of a case of cholera appears, all of the sick person's fellow-passengers, excepting friends who wish to remain to take care of him, must be removed from the compartment (*coupé*) in which the sick man is, and, when several compartments have one closet in common, from all of these compartments, and placed in another compartment separate from other travelers.

(5) The first care for the patient is to see that he is comfortably fixed, and this is the business of that guard under whose supervision that particular car has been placed.

(6) The conductor of every passenger train is to be supplied with a drop-bottle containing about 30^{ccm} of a mixture of like parts of simple tincture of opium and ether wine-spirits, from which are to be given to persons taken sick 20 to 30 drops, best on sugar. To children are to be given only as many drops as they are years old, none being given to children under 2 years of age.

(7) All train officials must thoroughly inform themselves in regard to the instructions issued relative to disinfection, in order that they can protect themselves from contagion when they or their clothing have come in contact with the ejections of sick persons; moreover, travelers who have come in contact with the ejections of sick persons must be informed in regard to the necessity of disinfection. The disinfection regulations are issued in a special instruction to the stations; the instructions in regard to the disinfection of the hands and other parts of the body, linen, and clothing, will be found under II, Nos. 2 and 3. The disinfection should, as a rule, take place at the next station; but in order that this can be done during the journey on trains which cover long stretches without halting, a sufficient supply of chloride of lime and potash soap must be supplied to the conductors of such trains.

AUSTRALIA—*Brisbane*.—Month of July, 1892. Population, 56,075. Total deaths, 67, including phthisis pulmonalis, 9; enteric fever, 1; diphtheria, 5; and whooping cough, 1.

Melbourne and suburbs.—Month of July, 1892. Population, 491,942. Total deaths, 582, including phthisis pulmonalis, 72; enteric fever, 8; scarlet fever, 2; diphtheria, 6; and whooping cough, 2.

BAHAMAS—*Dunmore Town*.—Two weeks ended September 22, 1892. Population, 1,472. One death.

Green Turtle Cay.—Two weeks ended September 8, 1892. Population, 3,686. Total deaths, 2.

CEYLON.—Three months ended March 31, 1892. Estimated population of the island, 3,052,592. Total deaths, 26,643, including smallpox, 23; enteric fever, 1,062; diphtheria, 1; measles, 60; and whooping cough, 18.

CHINA—*Hongkong*.—Month of June, 1892. Total deaths, 421, including phthisis pulmonalis 43 and smallpox 13.

CUBA—*Havana*.—The following report, dated October 8, 1892, has been received from the United States sanitary inspector:

There were 151 deaths in this city during the week ending October 6, 1892.

Fifteen of those deaths were caused by yellow fever, with approximately 70 new cases, 6 were caused by enteric fever, 4 by so-called pernicious fever, 1 by paludal fever, and 1 by diphtheria.

Santiago de Cuba.—Two weeks ended August 31, 1892. Total deaths, 54, including 2 from phthisis pulmonalis.

FRANCE—*Rouen*.—Month of August, 1892. Population, 111,847. Total deaths, 428, including choleraic diseases, 41; phthisis pulmonalis, 39; enteric fever, 34; croup, 1; and whooping cough, 2.

GREAT BRITAIN—England and Wales.—The deaths registered in 33 great towns of England and Wales during the week ended October 1 corresponded to an annual rate of 16.6 a thousand of the aggregate population, which is estimated at 10,188,449. The lowest rate was recorded in Croydon, viz, 7.4, and the highest in Blackburn, viz, 23.5 a thousand.

London.—One thousand two hundred and forty-five deaths were registered during the week, including measles, 12; scarlet fever, 32; diphtheria, 50; whooping cough, 6; enteric fever, 16; diarrhea and dysentery, 62. The deaths from all causes corresponded to an annual rate of 16.0 a thousand. In greater London 1,606 deaths were registered, corresponding to an annual rate of 14.6 a thousand of the population. In the "outer ring" the deaths including measles, 11; diphtheria, 12; and diarrhea, 23.

Ireland.—The average annual death rate represented by the deaths registered during the week ended October 1, in the 16 principal town districts of Ireland, was 16.6 a thousand of the population. The lowest rate was recorded in Wexford, viz, 4.5, and the highest in Dundalk, viz, 37.7 a thousand. In Dublin and suburbs 144 deaths were registered, including measles, 1; whooping cough, 1; scarlet fever, 1; enteric fever, 2; and diarrhea, 18.

Scotland.—The deaths registered in 8 principal towns during the week ended October 1 corresponded to an annual rate of 17.1 a thousand of the population, which is estimated at 1,447,500. The lowest mortality was recorded in Leith, viz, 12.6, and the highest in Perth, viz, 22.3 a thousand. The aggregate number of deaths registered from all causes was 475, including measles, 18; scarlet fever, 17; diphtheria, 10; whooping cough, 7; fever, 8; and diarrhea, 24.

GUIANA—Parimaribo.—Month of July, 1892. Population, 28,221. Total deaths, 87, including phthisis pulmonalis, 8; and typhus fever, 2.

NETHERLANDS.—Month of June, 1892. The deaths registered in the principal cities having an aggregate population of 1,227,347, correspond to annual rate of 20.5 a thousand. The deaths included phthisis pulmonalis and throat diseases, 185; typhus and enteric fevers, 8; scarlet fever, 7; smallpox, 1; croup, 16; measles, 42; and whooping cough, 29.

SWITZERLAND.—Week ended September 17, 1892. Reports from the 15 principal cities, having an aggregate population of 510,942, show a total of 167 deaths, including phthisis pulmonalis, 29; enteric fever, 3; scarlet fever, 2; diphtheria and croup, 2; measles, 2; and whooping cough, 1.

TURKEY IN EUROPE—Constantinople.—Month of August, 1892. Total deaths, 778, including 9 from smallpox.

WEST INDIES—St. Thomas.—Three months ended June 30, 1892. Total deaths, 119, including phthisis pulmonalis, 8; and croup, 1.

Turks Islands.—Four weeks ended September 21, 1892. Population, 4,744. Total deaths, 19. No deaths from contagious disease.

Cholera notes.

[Translated for this Bureau from the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, September 28, 1892.]

In Hamburg the cholera epidemic is on the decrease. On September 24 there were 81 choleraic cases and 49 deaths; on September 25, 126 cases and 47 deaths. In other parts of the German Empire the disease has declined. In most cases the persons infected were sailors. Of the 7 choleraic patients in the Moabit Hospital in Berlin on September 20, 6 were sailors employed on river boats.

Austria-Hungary.—The presence of cholera is reported at Cracow, Podgorze, and Molowice. The Imperial Gazette of September 9 gives the following figures: Podgorze, 4 cases and 4 deaths; Cracow, 11 cases and 2 deaths; Molowice, 4 cases and 2 deaths.

Belgium.—According to official statements, cholera was introduced into Belgium by means of a French steamer which arrived at Antwerp from Havre, August 15. On the night of August 15-16, a choleraic death occurred on board, followed by other deaths from the same cause on the 17th, 19th, and 20th of August. By September 2, there had been 63 choleraic cases, and 22 deaths in Antwerp; by September 8, 9 cases and 29 deaths. The infected persons belonged almost exclusively to the seafaring class. A report, dated September 16, gives 17 choleraic deaths in Belgium from September 1 to September 15. In Brabant, Hennegau, and West Flanders some isolated cases have occurred.

Netherlands.—Many cholera cases have been reported from Rotterdam and Kratingen. Three of these cases can be traced to vessels from Hamburg. The fourth case could not be traced. Several other isolated cases and deaths are reported from other localities. The first cholera case at Tiel occurred September 18, on a vessel that had been laden at Antwerp and towed from Dordrecht by a Dutch tug.

Official figures show the number of deaths from Asiatic cholera to be as follows: Rotterdam, 1; Kratingen, 1; Velsen, 1; Groningen, 1.

Russia.—In Russia the cholera epidemic has lately made some progress. The disease has pushed northward and seems likely to reach the White Sea. The number of cases is considerable, especially in localities recently infected. It is reliably estimated that since September 1 there have been 144,590 victims to the epidemic. Of this number, 53,200 belong to the Caucasus; 14,600 to the Don province; 9,500 to the Transcaspian province; 10,300 to Saratow; 9,700 to Samara; 7,500 to Astrachan; 7,700 to Tobolsk.

According to official reports of the epidemic there were 26 cholera cases and 10 deaths in city of Baku on September 7; in the government of Jelissawetpol, September 8, 119 cases, 71 deaths; Sakatala, September 11, 2 cases and 4 deaths; Eriwan, September 10, 189 cases and 180 deaths; Tiflis, September 11, 70 cases and 37 deaths; Kars province,

September 12, 21 cases and 17 deaths; and in the Kutais province, September 8, 6 cases and 7 deaths. In the Ciscaucasus, September 12, 53 cases and 24 deaths; in the province of Terek, 38 cases and 17 deaths; in the province of Kuban, 349 cases and 167 deaths; the government of Stawropol, 234 cases and 96 deaths; on the Volga, in the government of Astrachan, September 9, 9 cases and 13 deaths; Saratow, September 12, 379 cases, 166 deaths; Samara, 289 cases, 127 deaths; Simbirsk, 164 cases, 76 deaths; Kasan, 152 cases and 76 deaths; city of Nishni-Novgorod, where official measures of prevention were instituted September 6, 9 cases and 2 deaths; on September 13, in the government of Nissmi, Novgorod, 21 cases and 14 deaths; in the city of Wjatka, in September, 1 case and 1 death; in the government, from September 3 to September 8, a daily average of 110 cases and 44 deaths.

In the city of Vologda, from August 25 to September 5, 6 cases and 4 deaths; in the government of Perm, September 12, 18 cases and 5 deaths; Ufa, September 11, 41 cases and 20 deaths; Orenburg, September 12, 191 cases and 91 deaths; in the Ural province, 136 cases and 60 deaths; in the Turgai province, from September 10 to September 11, 81 cases and 36 deaths; in the Transcaspien, from September 1 to 10, no cases and no deaths; in Turkestan, September 10, there were 65 deaths; in the Akmolinsk province, September 9, there were 38 cases and 18 deaths, not including the city of Omsk, in which there were 12 cases and 9 deaths; in the Semipalatinsk province, 24 cases and 9 deaths. In the province of Tobolsk, from September 2 to September 9, there was a daily average of 374 cases and 191 deaths; in the city of Tomsk, September 9, 4 cases and 2 deaths.

In the Don province, September 8, 548 cases, 285 deaths; in the government of Jekaterinislav, September 12, 100 cases and 31 deaths; in Taurien, September 11, 24 cases and 16 deaths; Simferopol, September 10, 2 cases and 2 deaths; Kertsch, September 12, 28 cases, 15 deaths; in the government of Cherson, in which, up to September 8, there had been 277 cases and 83 deaths, there were, on September 12, 29 cases and 13 deaths; in the city of Kiew, 85 cases and 27 deaths; in the government of Kiew, 12 cases and 6 deaths; in the city of Poltawa, September 11, 17 cases and 11 deaths; in Charkow, September 12, 55 cases and 20 deaths; in the government of Woronesch, 91 cases and 26 deaths; Kursk, 33 cases and 6 deaths; in the city of Tschernigow, 6 cases and 1 death; in the government of Orel, from September 10 to 12, 51 cases and 14 deaths; Tambow, September 12, 170 cases and 78 deaths; Pensa, 8 cases and 4 deaths; Rjäsan, 22 cases and 19 deaths; Vladimir, 6 cases and 5 deaths; Kostroma, September 9, 3 cases and 2 deaths; Jaroslaw, September 12, 18 cases and 7 deaths; Novgorod, September 3 to 11, 5 cases and 8 deaths; Olonez, September 3 to 10, 24 cases and 8 deaths; on September 11, 5 cases and 3 deaths; in Moscow, September 16, 12 deaths; in the government of Moscow, 8 cases and 2 deaths. In St. Petersburg the fifteen hospitals had received, up to September 12, 3,038 cholera patients; of these 917 died. From September 12 to 13 there were 61 cases and 14 deaths; September 15, 59 cases and 8 deaths; in Cronstadt, September 12, there were 5 cases; in Riga, up to September 16, there had been 24 cases; in the government of Lublin, September 12, 87 cases and 32 deaths. From September 1 to September 13 the total number of cases and deaths was 921 and 280.

Persia.—The international health council at Constantinople has received the following reports of the epidemic in Persia: Kahan, August

17, 5 cases, 1 death; Abadeh, August 17, 33 cases, 9 deaths; Khoi, August 17, 50 cases, 30 deaths; Zendjan, August 17, 19 cases, 7 deaths; Casvin, August 17, 11 cases, 3 deaths; Mesched, August 17, 19 cases, 4 deaths; Yezd, August 17, 160 cases, 63 deaths; Teheran, August 15, 16, 1,800 cases, 600 deaths; Tebriz, August 15, 16, 1,200 cases, 400 deaths; Teheran, August 17-21, 2,200 cases, 1,300 deaths; Tebriz, August 17-21, 1,200 cases, 800 deaths; Tebriz, August 21-24, 700 cases, 350 deaths; Teheran, August 21-24, 1,300 cases, 900 deaths; Hamadan, August 27, 70 cases, 5 deaths; Urmia, August 29, 100 cases, 50 deaths; Kaschan, August 31, 60 cases, 40 deaths; Schiraz (outbreak), September 5, 1,000 cases, 500 deaths; Teheran, August 24-29, 2,400 cases, 1,500 deaths; Teheran, September 1, 1,500 cases, 700 deaths; Teheran, September 5, 800 cases, 320 deaths; Tebriz, August 24-29, 1,200 cases, 750 deaths; Tebriz, September 1-5, 1,400 cases, 750 deaths; Tebriz, September 5, 900 cases, 400 deaths.

Arabia.—Official reports state a fresh outbreak of cholera in Yemen, in the harbor of Loheia, and in some towns of the Beni Djami, near Hodeida. It appears to have been communicated from Harrar.

East Indies.—A violent outbreak of cholera in the harbor of Karrat-schi is reported.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—							
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
Vienna.....	Sept. 24....	1,406,933	594	.....	.....	.....	.....	8	3	24	2
Hamburg.....	Sept. 24....	570,534	1,065	.....	.....	.....	.....	11	5	4	4
Warsaw.....	Sept. 24....	490,417	357	.....	.....	10	.....	4	25	12	.....
Brussels.....	Sept. 24....	482,158	178	10	.....	.....	.....	2	2	1	.....
Brussels.....	Oct. 1.....	482,158	181	17	.....	.....	.....	2	.....	.....	.....
Lyons.....	Sept. 24....	430,000	118	.....	.....	.....	.....	4	1	1	.....
Munich.....	Sept. 24....	366,000	181	.....	.....	.....	.....	.....	.....	.....	.....
Odessa.....	Sept. 24....	302,000	126	.....	.....	.....	.....	1	7	5	1
Dresden.....	Sept. 24....	301,400	117	.....	.....	.....	.....	.....	.....	.....	.....
Cologne.....	Oct. 1.....	294,090	106	.....	.....	.....	.....	.....	.....	5	2
Palermo.....	Sept. 24....	250,000	73	.....	.....	.....	.....	1	.....	.....	.....
Stockholm.....	Sept. 24....	248,051	300	.....	.....	.....	.....	8	25	26	.....
Stockholm.....	Oct. 1.....	248,051	265	.....	.....	.....	.....	5	13	31	.....
Antwerp.....	Sept. 24....	241,263	109	7	.....	2	.....	4	.....	.....	.....
Antwerp.....	Oct. 1.....	241,263	99	8	.....	.....	.....	2	1	1	.....
Rotterdam.....	Oct. 1.....	216,679	57	4	.....	.....	.....	3	.....	.....	.....
Pernambuco.....	Sept. 1.....	200,000	76	.....	1	1	.....	5	.....	.....	.....
Pernambuco.....	Sept. 8.....	200,000	53	.....	.....	.....	1	.....	.....	.....	.....
Pernambuco.....	Sept. 15.....	200,000	50	.....	.....	.....	.....	3	.....	.....	.....
Hanover.....	Sept. 24....	185,200	68	.....	.....	.....	.....	.....	.....	2	1
Genoa.....	Oct. 1.....	181,834	59	.....	.....	3	2	.....	.....	1	.....
Frankfort-on-the-Main.....	Sept. 17.....	180,000	61	.....	.....	.....	.....	1	1	4	.....
Frankfort-on-the-Main.....	Sept. 24....	180,000	63	.....	.....	.....	.....	2	.....	5	.....
Venice.....	Sept. 17.....	162,664	69	.....	.....	.....	1	1	.....	1	.....
Venice.....	Sept. 24....	162,664	56	.....	.....	.....	.....	1	.....	.....	.....
Trieste.....	Sept. 24....	158,054	71	.....	.....	.....	.....	1	.....	7	.....
Christiania.....	Sept. 24....	156,500	48	.....	.....	.....	.....	.....	.....	1	.....
Nuremberg.....	Sept. 17.....	151,206	60	.....	.....	.....	.....	1	.....	3	.....
Ghent.....	Oct. 1.....	150,208	60	2	.....	.....	.....	.....	.....	.....	1
Stuttgart.....	Oct. 1.....	139,659	58	.....	.....	.....	.....	.....	.....	7	.....
Bremen.....	Sept. 24....	126,600	33	.....	.....	.....	.....	.....	.....	.....	.....
Crefeld.....	Oct. 1.....	108,000	62	.....	.....	.....	.....	.....	.....	.....	.....
Aix-la-Chapelle.....	Sept. 25....	106,907	35	.....	.....	.....	.....	.....	.....	.....	.....
Gothenburg.....	Sept. 24....	105,800	24	.....	.....	.....	.....	.....	1	.....	.....
Rheims.....	Oct. 1.....	105,408	53	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn.....	Oct. 2.....	103,305	36	.....	.....	.....	.....	1	.....	.....	.....
Zurich.....	Sept. 24....	91,323	21	.....	.....	.....	5	.....	1	10	3
Mayence.....	Sept. 24....	72,281	21	.....	.....	.....	.....	.....	.....	2	.....
Mayence.....	Oct. 1.....	72,281	25	.....	.....	.....	.....	.....	.....	1	.....
Jerez de la Frontera.....	Sept. 24....	61,708	40	.....	.....	.....	.....	1	2	.....	.....
Marsala.....	Sept. 24....	40,131	14	.....	.....	.....	.....	1	.....	.....	.....
Curaçoa.....	Sept. 24....	26,782	31	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz.....	Sept. 30....	25,000	30	.....	5	.....	.....	.....	.....	.....	.....
Vera Cruz.....	Oct. 7.....	25,000	30	.....	2	.....	.....	.....	.....	.....	.....
Girgenti.....	Sept. 1.....	23,847	10	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos.....	Oct. 1.....	20,000	11	.....	.....	.....	.....	.....	.....	.....	.....
Sagua la Grande.....	Oct. 1.....	18,109	10	.....	.....	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	July 16....	17,000	18	.....	10	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	July 23....	17,000	15	.....	8	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	July 30....	17,000	16	.....	6	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	Aug. 6....	17,000	17	.....	5	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	Aug. 13....	17,000	16	.....	4	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	Aug. 20....	17,000	13	.....	.....	.....	.....	.....	.....	.....	.....
Rio Grande do Sul.....	Aug. 27....	17,000	17	.....	.....	.....	.....	.....	.....	.....	.....
Victoria.....	Oct. 1.....	16,841	6	.....	.....	.....	.....	.....	.....	.....	.....
St. Georges.....	Oct. 3.....	15,013	2	.....	.....	.....	.....	.....	.....	.....	.....
St. Georges.....	Oct. 10....	15,013	1	.....	.....	.....	.....	.....	.....	.....	.....
Flushing.....	Oct. 1.....	14,600	6	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas.....	Aug. 12....	12,019	24	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas.....	Sept. 2.....	12,019	25	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas.....	Sept. 9.....	12,019	21	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas.....	Sept. 16....	12,019	27	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas.....	Sept. 23....	12,019	26	.....	.....	.....	.....	.....	.....	.....	.....
Sonneberg.....	Oct. 2.....	12,000	1	.....	.....	.....	.....	.....	.....	.....	.....
Guelph.....	Oct. 8.....	10,539	4	.....	.....	.....	.....	.....	.....	.....	.....
Chatham.....	Oct. 8.....	10,000	1
Amherstburg.....	Oct. 8.....	2,260	1

*Nine deaths also reported from cholera.

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